

End

an n-type GaAs substrate. It is composed of 12 pairs of n-doped 1/4 wavelength thick AlAs/GaAs layers followed by one AlAs/Al_{0.2}Ga_{0.8}As layer pair to form the bottom mirror 52. Directly above this was grown an undoped 0.8 μm thick GaAs layer 54, which is to be etched away to form the air gap 64 (see also Figure 7C). The top DBR is composed of 18.5 pairs of 1/4 wavelength thick p-doped Al_{0.2}Ga_{0.8}As/Al_{0.7}Ga_{0.3}As layers, followed by a ½ wavelength thick layer of p-doped Al_{0.7}Ga_{0.3}As. The top layer is a 1/4 μm thick p-doped layer of Al_{0.2}Ga_{0.8}As. This layer was included to add stiffness to the mechanical structure and is referred to as the stiffening layer. The n-doping and p-doping were set at 1e18cm⁻³, with the exception of the top 0.1 μm of the stiffening layer, which was doped 1e19cm⁻³ to decrease contact resistance.

Q2

Rewrite the paragraph beginning at Page 15, Line 8, as follows:

Figure 10 illustrates a low-finesse cavity, MOCVD-grown wafer that may be used to fabricate the structure of the invention. The wafer of Figure 10 is designed to be measured at wavelengths in the range of 915nm to 950 nm, with a nominal wavelength of 915 nm. The wafer was grown using Metal-Organic Chemical Vapor Deposition (MOCVD) on an n-type GaAs substrate. The first epitaxial layer is a 6/2 wavelength thick Al_{0.53}Ga_{0.47}As layer n-doped at 1e18cm⁻³ forming bottom mirror 52. On top of this is the top mirror 32, a first portion of which is undoped GaAs sacrificial layer 54 with a thickness of 1.36 μm. Next is a 29/4 wavelength thick Al_{0.53}Ga_{0.47}As layer. The upper half of this layer is doped p-type at 1e18cm⁻³, while the bottom half is undoped. On the top of the structure is a ½ wavelength thick GaAs cap layer doped at 1e19cm⁻³ to lower contact resistance.

In The Drawings:

Revise Figures 7A, 9 and 10 as shown in Appendix B.